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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,138	04/08/2004	Toshihiro Sone	016887-1105	6661
22428	7590	08/31/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			BRASE, SANDRA L	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,138

Applicant(s)

SONE ET AL.

Examiner

Sandra L. Brase

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/8/04&1/14/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the non-contact temperature sensor, located above the horizontal surface passing the rotation axis of the rotational heating member, shielded by a magnetic shield must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 13. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The disclosure is objected to because of the following informality: on page 6, line 10, change "5" to "160".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, 6, 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Peng et al. (US 2004/0086295).

7. Peng et al. (...295) disclose an image forming system comprising: a manuscript image reading device to scan a manuscript and obtain shade information on the manuscript ([0143]-[0145]); an exposure/development device to record a charged latent image in a photosensitive body based on the shade information obtained by the manuscript image reading device, to apply toners to the photosensitive body to transfer the toners to a recording medium ([0146] – [0048]); and a fixing device to fix the toners transferred to the recording medium by thermal pressing ([0149]); the fixing device having a rotational heating member (51); a pressing roller (54) for pressing from a bottom of the rotational heating member; and a non-contact temperature detector (52) provided above a horizontal surface passing a rotation axis of the rotational heating member, which detects a temperature of the rotational heating member ([0160]); wherein heating of the rotational heating member is controlled by a value detected by the non-contact temperature detector ([0063] – [0068]). The non-contact temperature detector is disposed within a range of

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30 degrees with a plane running through a rotation axis of the rotational heating member being angle 0 and the rotation axis being the angle center ([0160]). The non-contact temperature detector is disposed at a position apart from the rotating heating member by 3-10 mm ([0164]). The rotational heating member is a heating roller ([0149] and figure 1). The heating roller is heated by a heating ray using a heating ray irradiation means ([0176]), where the heating ray is an infrared ray ([0195]).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 4, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peng et al. (US 2004/0086295) in view of Ishizuka et al. (US 6,408,159).

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11. Peng et al. (...295) disclose the features mentioned previously, but do not disclose the claimed cleaning means. Ishizuka et al. (...159) disclose an image forming device including a cleaning means to clean a surface of a rotational heating member provided in an upstream side of the rotation direction of the rotational heating member (col. 10, lines 48-58). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed cleaning means, as disclosed by Ishizuka et al. (...159), so as to protect against detection error due to sticking toner.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peng et al. (US 2004/0086295) in view of Birumachi (US 2003/0086718).

13. Peng et al. (...295) disclose the features mentioned previously, but do not disclose the heating roller heated by induction heating. Birumachi (...718) discloses an image forming device including a fixing device including a heating roller heated by an induction heating device (102) ([0039]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed induction heating device, as claimed by Birumachi (...718) since such a heating device for generating heat for heat fixation of an image is well known in the art.

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peng et al. (US 2004/0086295) in view of Ishizuka et al. (US 6,408,159) as applied to claim 10 above, and further in view of Birumachi (US 2003/0086718).

15. Peng et al. (...295) in view of Ishizuka et al. (...159) disclose the features mentioned previously, but do not disclose the heating roller heated by induction heating. Birumachi

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(...718) discloses an image forming device including a fixing device including a heating roller heated by an induction heating device (102) ([0039]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed induction heating device, as claimed by Birumachi (...718) since such a heating device for generating heat for heat fixation of an image is well known in the art.

16. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peng et al. (US 2004/0086295) in view of Katayanagi et al. (US 6,816,699).

17. Peng et al. (...295) disclose the features mentioned previously, but do not disclose the rotational heating member is a heating belt. Katayanagi et al. (...699) disclose an image fixing device in an image forming system including a heating belt (94) as a rotational heating member (col. 10, lines 35-50; and figure 4). It would have been obvious to one of ordinary skill in the art at the time of the invention for the rotational heating member to be a belt, as disclosed by Katayanagi et al. (...699), since a belt is a well known form in the art to serve as a rotational heating element to fix images onto a sheet.

18. Claims 1, 6, 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birumachi (US 2003/0086718) in view of Peng et al. (US 2004/0086295).

19. Birumachi (...718) discloses an image forming system including a development device to apply developer to form a toner image on a sheet (0004) and a fixing device (100) to fix the toners transferred to the recording medium by thermal pressing ([0149]); the fixing device having a rotational heating member (101); a pressing roller for pressing from a bottom of the

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rotational heating member (figure 1); and a non-contact temperature detector (106) provided above a horizontal surface passing a rotation axis of the rotational heating member, which detects a temperature of the rotational heating member ([0039]); wherein heating of the rotational heating member is controlled by a value detected by the non-contact temperature detector ([0039] – [0040]). The rotational heating member is a heating roller (figure 1). The heating roller heated by an induction heating device (102) ([0039]). However, Birumachi (...718) does not disclose the claimed manuscript image reading device and exposure device. Peng et al. (...295) disclose an image forming system comprising: a manuscript image reading device to scan a manuscript and obtain shade information on the manuscript ([0143]-[0145]); an exposure/development device to record a charged latent image in a photosensitive body based on the shade information obtained by the manuscript image reading device, to apply toners to the photosensitive body to transfer the toners to a recording medium ([0146] – [0048]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed manuscript image reading device and the claimed exposure device, as disclosed by Peng et al. (...295), since such are known components in an image forming apparatus so that images can be read and then reproduced to make copies.

20. Claims 5, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birumachi (US 2003/0086718) in view of Peng et al. (US 2004/0086295) and Kouno et al. (US 5,915,147).

21. Birumachi et al. (...718) in view of Peng et al. (...295) disclose the main features mentioned previously, but do not disclose the claimed shield for the temperature sensor. Kouno

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et al. (...147) disclose a shield for a temperature sensor that is made of a material that has a magnetic shielding function (col. 25, lines 14-28), where this shield surrounds the temperature sensor and hence it is inherent that the shield would prevent substances from attaching to the temperature detector. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed shield, as disclosed by Kouno et al. (...147) so that the intrusion of magnetic flux is shielded and the precision of the temperature control can be further heightened.

22. Claims 14, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita et al. (US 5,819,136) in view of Peng et al. (US 2004/0086295).

23. Tomita et al. (...136) disclose an image forming system comprising: an exposure/development device to record a charged latent image in a photosensitive body to apply toners to the photosensitive body to transfer the toners to a recording medium (col. 3, lines 7-18); and a fixing device (8) to fix the toners transferred to the recording medium by thermal pressing (col. 3, lines 30-37). The fixing device having a rotational heating member (9); a pressing roller (10) for pressing from a bottom of the rotational heating member (figure 1); a non-contact temperature detector (14) provided above a horizontal surface passing a rotation axis of the rotational heating member (figures 1, 9, 10 and 11), which detects a temperature of the rotational heating member (col. 3, lines 38-48); and a heat convection direction change means (20) to direct heat convection generated by the rotational heating member to directions other than the direction of the non-contact temperature detector (figures 1, 9, 10 and 11), wherein heating of the rotational heating member is controlled by a value detected by the non-contact temperature

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detector (col. 3, lines 38-48). The heat convection direction change means is a fan (20).

However, Tomita et al. (...136) do not disclose the claimed manuscript reading device and the claimed placement of the non-contact temperature detector. Peng et al. (...295) disclose an image forming system comprising: a manuscript image reading device to scan a manuscript and obtain shade information on the manuscript ([0143]-[0145]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed manuscript image reading device and the claimed exposure device, as disclosed by Peng et al. (...295), since such are known components in an image forming apparatus so that images can be read and then reproduced to make copies. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed manuscript image reading device, as disclosed by Peng et al. (...295), since such a component in an image forming apparatus is well known so that images can be read and then reproduced to make copies. The non-contact temperature detector is disposed within a range of 30 degrees with a plane running through a rotation axis of the rotational heating member being angle 0 and the rotation axis being the angle center ([0160]). The non-contact temperature detector is disposed at a position apart from the rotating heating member by 3-10 mm ([0164]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed positioning of the non-contact temperature detector, as disclosed by Peng et al. (...295), so as to detect the temperature of the heating surface more accurately and stably.

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24. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomita et al. (US 5,819,136) in view of Peng et al. (US 2004/0086295) as applied to claim 15 above, and further in view of Tsubakimoto (US 6,603,938).

25. Tomita et al. (...136) in view of Peng et al. (...295) disclose the features mentioned previously, but do not disclose the source of air for the fan. Tsubakimoto (...938) disclose a fan that inhales outside air for cooling (abstract; and col. 2, lines 49-51). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the fan inhale outside air, as disclosed by Tsubakimoto (...938), since it is well known in the art for a fan to inhale outside air for cooling.

Allowable Subject Matter

26. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nanataki et al. (US 6,654,571), Tamaoki (US 6,684,037), Yokoi et al. (US 6,795,680), Kataoka (JP2001-034109) and Ishikawa et al. (JP 2004-045330) disclose a non-contact temperature detection device.

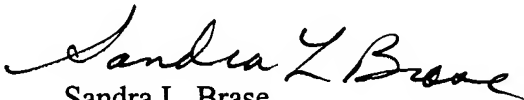
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Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is (571) 272-2131. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley, can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sandra L. Brase
Primary Examiner
Art Unit 2852

August 29, 2005